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ABSTRACT

Two studies investigated the modification of tasks by students in different public school settings. The first study examined task modification in physical education settings and the second study considered task modification by learning disabled students in a resource room and in two mainstream settings. In study 1 a systematic observation system was used to describe interactions among students, teachers, and the environment. Teacher task statements, student tasks, student responses, and response consequences were classified. Subjects were nine physical education teachers and one target student in each of 24 lessons. The special education study involved similar classification of interactions during 72 lessons involving two 14-year-old eighth grade learning disabled males. Results of both studies indicated very low levels of student verbal negotiation in modifying tasks. Students modified tasks in the physical education setting by engaging in the task with a high rate of error. Learning disabled students were more likely to emit responses which did not comply with or which only partially complied with the stated instructional tasks. Results confirm previous studies' findings that ability level of the student and the amount of risk involved in tasks is related to how students attempt to modify them. Includes 14 references. (DB)

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Student Negotiation of Tasks in Physical Education and Special Education Settings

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Abstract

Student Modification of Tasks reports the results of two related studies. The primary focus of the studies was to investigate the modification of tasks by students in different public school settings. The first study focused on task modification in physical education settings and the second study focused on task modification by learning disabled students in a resource room and in two mainstream classrooms.

The results of both studies indicated very low levels of student verbal negotiation in modifying tasks. In the physical education study, there were no instances of student verbal negotiation. In the special education study, fewer than one percent of the instructional tasks led to any type of verbal negotiation. Instead, students modified tasks in the physical education setting by engaging in the task with a high rate of error. The learning disabled students were more likely to emit responses which did not comply with or which partially complied with the stated instructional tasks. These results indicate confirmation of previous studies that ability level of the student and the amount of risk involved in tasks is related to how students attempt to modify them.

Student Negotiation of Tasks in Physical Education and Special Education Settings

Since the 1960's the dominant paradigm in research on teaching has been the Process-Product Paradigm. According to this paradigm, statements about effective teaching take the form of empirically established connections between teaching behaviors and gains in student achievement. A large portion of the literature implies that the direct causal agent of learning in an instructional setting is a teacher's actions. More recently, research on teaching has begun to examine student mediating variables such as time on task, content covered, opportunity to respond, and academic learning time (Berliner, 1979; Greenwood, Delquardi & Hall, 1984; Stallings, 1980).

Doyle (1978) has criticized both paradigms as being too narrow. He has suggested instead, broadening the scope of the research to include interactions between students and teachers as well as an examination of the context in which the behaviors occur. The model proposed by Doyle focuses on tasks as they are accomplished in classrooms. The basic assumption of the task model is that task accomplishment is

viewed as an intervening process variable which links teacher behavior and student achievement. In this model, the question of how students go about learning is really a question of what students have to do to meet the requirements of the classroom. The model posits that an explanation of student learning can only be obtained through a description of the instructional and managerial tasks, and the environmental conditions under which these tasks are accomplished. The assumption is that the nature of tasks and how they are managed determines what students attend to, what skills they practice, and ultimately what they learn (Doyle, 1985). The study of tasks then is a key component in determining what is accomplished in classrooms.

From the theoretical perspective the curriculum exists in the classroom in the form of academic tasks that teachers assign students to accomplish with the subject matter (Doyle, 1983). The concept of "task" calls attention to three key aspects: a goal or end product to be achieved, a set of conditions and resources available to accomplish the task, and the importance of the work to be done. Another aspect of the task model involves negotiation of tasks. Associated with the

accomplishment of each task is a varying level of reward and uncertainty. Doyle has referred to these as ambiguity and risk. Ambiguity can result when teachers do not specifically state performance expectations. Risk is embedded within the task system. The major task for students is to achieve a favorable exchange of performance for grades (Becker, Geer, & Hughes, 1968). The significance or "weight" of the task in the exchange system determines the amount of risk involved. Students often attempt to increase the specificity of the task and decrease the risk of the task through negotiation.

Previous studies have used Doyle's model to study task systems in classrooms (Doyle, 1981; Doyle & Carter, 1984; Tousignant & Siedentop, 1983; Alexander, 1982). These studies have indicated that students used both direct and indirect negotiation to successfully modify tasks. When attempts to negotiate tasks fail, students may fail to complete the task or they may complete the task with a high rate of error.

In examining products produced in English classes, Doyle (1981)

found that students attempted to verbally negotiate assignments which were graded by the teacher. Exercises which involved little risk were rarely negotiated. Carter and Doyle (1982) focused on similarities and differences in student negotiation in high-ability and average ability English classes. They found that successful attempts to negotiate occurred more frequently in high-ability classrooms. Tousignant & Siedentop (1983) looked at negotiation in physical education classes. They found that while little verbal negotiation took place, students became "competent bystanders". They gave the appearance of participation, but they engaged in tasks at a minimal level. In an attempt to quantify the findings of previous studies, Alexander (1982) used the methodology of Applied Behavior Analysis to examine task structures in a physical education setting. Rather than narrative accounts, Alexander used strategies for the study of human behavior based on the three term contingency explicated by Skinner (1953). By examining the antecedents and consequences of tasks, Alexander found that the consequence following the performance defined the nature of the task. The student was rarely held accountable for

completing specified instructional tasks; thus, while there was a great deal of ambiguity in the task statements, there was little risk involved and little need for the student to negotiate the tasks.

This report describes two studies which investigated tasks and how they were modified in different public school settings. Because the two studies were conceptually and theoretically related, they are reported together. The first study focused on task negotiation in physical education settings and the second study focused on the task negotiation of two learning disabled students in a resource classroom and in two mainstream classrooms. Since physical education classes typically involve little risk for the students (Tousignant, 1982) and students with learning disabilities are often characterized as low achievers, the studies examined other forms of task modification along with student verbal negotiation.

Methods and Procedures

Study One - Physical Education

A systematic observation system was developed to describe interactions among students, teachers and the environment in physical

education classrooms. The observation system was designed to be used by human observers in the natural setting and incorporated descriptive and categorical forms of data collection. The Task Structure Observation Instrument (TOSI) had three levels: a time measure, a description of student behavior, and a description of teacher behavior. Observers were trained to record the duration and a brief description of the task. Teacher task statements were defined as the explicit or implicit instructions to students, spoken or written by the teacher, about what the student was expected to do. The task was then categorized by type, specification, form, direction, and accountability. The responses of the target student were classified into one of nine categories. These included: off-task (OT), off-task disruptive (OT-), engaged in task with few errors (ST+), engaged in task with a high rate of error (ST-), task modified in an upward direction (MT+), task modified in a downward direction (MT-), routine (R), verbal student negotiation (SN), or verbal response to a question (V). The consequences which followed the student's responses were also classified. Consequence categories included: feedback (F), desist (D),

restatement (RS), extension (E), prompt/hustle (PH), classmate supports (C+), classmate disrupts (C-), teacher records (T Rec), student records (S Rec), external reward (Ex R), external punishment (Ex P), and no consequence (NC) (See Figure 1).

Figure 1. Sample of a Physical Education Coding Sheet

Date _____ School _____ Page ____ of ____

Teacher _____ Grade ____ Observer _____

Lesson Subject _____

Setting _____

SER	T	S	F	D	A	ANTECEDENT TASK DESCRIPTION	TIME BEGIN	TIME END	RES	CON	COMMENTS NOTES
3:00 ____ 6:00 ____	ME MA MD MM SK SC T	I PE FE	V W DV WV	C SG I	F IF N						
9:00 ____ 12:00 ____ 15:00	ME MA MD MM SK SC T	I PE FE	V W DV WV	C SG I	F IF N						
18:00 ____ 21:00 ____ 24:00	ME MA MD MM SK SC T	I PE FE	V W DV WV	C SG I	F IF N						

The TOSI was used to study 24 physical education lessons. The subjects in the study included three elementary physical education teachers, three junior high school physical education teachers, two high school physical education teachers, and one target student, randomly selected, in each lesson. Six classes were observed for three consecutive lessons, one class for two consecutive lessons, and one class for four consecutive lessons. Each teacher task statement was recorded, the time the statement occurred was recorded, and the target student's response was identified and coded with reference to the pre-determined categories. When the student response changed, the time of the change and the new response were recorded. After each response, a consequence was coded. The process continued with each new task statement made by the teacher.

Two coders coded each class session. Inter-observer agreement scores for task statements, student responses, and teacher consequences were calculated. As an additional accuracy measure, eight of the class sessions were video taped, and the video tapes were

then coded by two coders and compared to the original live coding sheets. At the completion of the coding, the frequency and percentage of each category was calculated and the results graphically displayed for comparison across settings and among teacher and student categories.

Study Two - Special Education

The special education study provided a description of 72 lessons; 24 in a social studies class conducted in a resource classroom, 24 in a mainstream science classroom, and 24 in a mainstream health classroom. The subjects were two 14 year old eighth grade males identified as learning disabled. The three teachers who participated in the study included a secondary special education teacher, a secondary health education teacher, and a secondary science education teacher.

One lesson in each setting was video taped each day during a six week grading period. All teacher task statements were recorded and classified according to type and direction of the statement. Task

statements in this setting were defined as the vocal or non-vocal responses expected of the students as stated by the teacher or written in materials assigned to the students. Each imperative or interrogative statement directed to the student was considered a separate task. Student responses to task statements were classified according to the type of compliance. Student codes were labeled as full compliance (+), partial compliance (p), non-compliance (-), or indeterminable compliance (I). The category "indeterminable" compliance was used to convey a task in which the teacher would not be able to determine whether or not the student had complied. In addition to coding compliance responses, all statements or questions made by the target students which attempted to change, clarify, or modify a task statement were recorded (see Figure 2 for a sample of the coding sheet). Task statements were categorized as management, instructional questions, or instructional tasks. When a task was classified as an "instructional" task, the teacher's behavior which followed the student response was recorded and classified. Teacher behavior categories included: Teacher Record (TR), Look at/Listen to

response with a comment (LL-C), Look at/Listen to a response with no comment (LL-NC), and Unobserved (U).

Figure 2. Sample Special Education Coding Specification Sheet.

Day _____ Class Resource _____ Page _____ of ____

Time	Task Statement	Comp A	Comp B	NV/V	W/I	I/M	Consq.
3:00	We need to go over the check up questions, so get those out on your desk	-	-	NV	W	IM	
3:15	P. 92, P. 92 You need to be on P. 92	-	-	NV	W	IM	
6:49	See if you have turned your paper in	+	+	NV	W	IM	
7:06	Listen for your name	+	+	NV	W	IM	

Frequency and percentage of each category of teacher and student responses were calculated and the results graphically displayed for comparison across settings and among teacher and student categories.

Accuracy measures were conducted on the timing of 15 tapes and the task statement count on 15 coding sheets. Inter-observer agreement scores were collected from a total of 15 sessions, five from each setting. The scores were computed for the number of task statements in each setting, the type of compliance to the task statement, the direction and type of each statement, and the number of verbal negotiating statements and questions emitted by each student.

Results

Study One - Physical Education Study

A total of 351 student behaviors in response to 331 stated tasks were recorded during the 24 lessons. Inter-observer agreement scores for the type, specification, form, and direction of the task statements were all above 85%. Inter-observer agreements scores for the response categories were all above 80%.

The student response categories which related to student negotiation of the TOSI instrument included the student response categories: off-task (OT), off-task disruptive (OT-), engaged in task with few errors (E+), engaged in task with a high rate of error (E-), task modified in an upward direction (MT+), task modified in a downward direction (MT-), and verbal student negotiation (VN). The category, routine (R) was recorded when students engaged in what appeared to be a sanctioned, expected task with little or no direction from the teacher. The percentage of occurrence of response behaviors across the three settings is presented in Table 1. The results indicate that most response behaviors were expected, acceptable behaviors. Seventy-three percent of the responses were either engagement in the task with few errors or engagement in a routine task. This data may lead to the interpretation that the students generally were on task and had very little difficulty with the tasks. However, 43% of the tasks were coded as implicitly communicated and 49% were coded as partially explicit. The teacher specified a performance without specifying the conditions or criteria for successful completion. Coders were instructed to base the response codes on what the teachers

actually said. The high occurrence of partially explicit and implicit task statements led coders to record response behaviors in the high engagement category because the explicitness of the task was often vague and lacking in any type of topographical criteria for performance. Therefore, a wide range of responses were considered to be acceptable.

Table 1. Percentage of Occurrence of Response Behaviors in Physical Education.

Category	Elementary N=10	Junior High N=8	High School N=6	All Observations N=24
OT	4	5	13	6
OT-	0	0	2	03
ST+	55	49	40	50
ST-	11	4	20	11
MT+	1	0	0	07
MT-	3	4	6	6
R	21	37	07	23
SN	0	0	0	0
V	5	1	2	3

N = Number of lessons observed.

Tasks modified in an upward and downward direction accounted for 13% of the total responses emitted by students, while task performed with a high rate of error accounted for 11% of the responses. The students' responses were coded as off-task for 9% of the responses. There were no responses emitted which were coded as student verbal negotiation. Though there was a great deal of ambiguity in the task statements, the physical education students in this study did not use verbal negotiation to modify tasks. Instead, they modified the tasks through modified performance.

While the task statements indicated a great deal of ambiguity, the consequences for the tasks indicated very little risk. Data indicating teacher consequences which related to the exchange of performance for grades is presented in Table 2. Only ten percent of the responses were consequated by the recording of either the teacher or a student. Since grades were determined by what was recorded, it is evident that only a small portion of the student responses "counted". The vast majority of the responses, 61%, were not consequated by the teacher.

Table 2. Percentage of Occurrence for Consequence Behavior in Physical Education.

Category	Elementary N=10	Junior High N=8	High School N=6	All Observations N=24
E	6	4	1	4
PH	1	2	0	1
D	1	2	5	3
F	22	4	5	12
RS	2	7	5	5
C-	0	0	4	1
C+	0	0	4	1
S Rec	.07	19	0	5
T Rec	5	7	4	5
Ex P	1	0	0	.06
Ex R	2	0	0	.09
NC	57	55	72	61

N = Number of lessons observed

Study Two - Special Education Study

During the study, 2,145 task statements were recorded in the three settings; 776 in the resource classroom, 646 in the health classroom, and 723 in the science classroom. Inter-observer agreement scores for frequency, direction, and type of task statement were all above 80%. Inter-observer agreement scores for the type of compliance were above 90% for each of the students in all three settings.

There was little difference among the settings in the number of task statements and in the number of tasks to which the students fully complied. Both students fully complied with more than two-thirds of the tasks in all three settings. When tasks were classified into management and instructional categories however, differences across settings began to emerge. A task was coded as "instructional" when the teacher statement specified or implied reading, writing, listening, speaking, attending, knowing, or understanding behaviors directly related to the lesson being taught. Table 3 presents the frequency of instructional tasks presented in each setting to the two students along with the type of compliance.

Table 3. Frequency and Percentage of Instructional Task Statements Complied in the Resource, Health and Science Classrooms.

Classroom	Type of Compliance				Total
	Full	Partial	Non	Indeterminable	
Resource					
Student A					
Frequency	166	6	12	3	187
Percentage	89	3	6	2	100
Student B					
Frequency	181	30	33	2	246
Percentage	74	12	13	1	100
Health					
Student A					
Frequency	103	4	35	36	178
Percentage	58	2	20	20	100
Student B					
Frequency	98	4	49	35	186
Percentage	53	2	26	19	100
Science					
Student A					
Frequency	179	22	34	2	237
Percentage	76	9	14	1	100
Student B					
Frequency	110	23	99	6	238
Percentage	46	10	41	3	100

In the Resource classroom, Student A fully complied with more than 80% of the 187 instructional tasks presented, while Student B fully complied with more than 70% of the 246 instructional tasks. In the science classroom, Student A complied with 76% of the 237 instructional tasks, while Student B complied with only 46% of the 238 instructional tasks. In the health classroom, the percentage of full compliance for both students was below 60%.

Many of the instructional tasks did not carry any formal accountability for a performance-grade exchange. Those tasks that had a formal accountability component were instructional tasks. The differences among compliance with these tasks accounted for the differences in the grades which the students received. However, it was difficult for the students to discriminate among tasks which did carry weight and those which did not. The two mainstream teachers were less likely than the resource room teacher to hold the students accountable for compliance. Table 4 shows the percentage of teacher accountability consequences to responses with instructional tasks in the three classrooms. For both students, less than ten percent of the responses in the resource classroom were unobserved. In the

mainstream classrooms, more than half of the responses were unobserved. Less than one-fourth of the responses in the mainstream were recorded by the teacher, while in the resource room, one-half of the responses were recorded by the teacher.

Table 4. Percentage of Teacher Accountability Consequences in the Resource, Health, and Science Classrooms.

Type of Teacher Consequence	Percentage of Total Student A	Student B
Resource		
Teacher Record	64.2	49.2
Look/Listen Comment	17.1	35.0
Look/Listen No Comment	10.2	9.3
Unobserved	8.6	6.5
Total	100	100
Health		
Teacher Record	21.3	19.4
Look/Listen Comment	10.1	7.5
Look/Listen No Comment	7.3	6.5
Unobserved	61.2	66.7
Total	100	100
Science		
Teacher Record	16.0	17.7
Look/Listen Comment	10.1	10.5
Look/Listen No Comment	10.5	9.2
Unobserved	63.3	62.6
Total	100	100

The instructional tasks for which students were held accountable were the tasks which involved the greatest amount of risk for the students, yet as Table 5 indicates very little negotiation took place. Instead, the students were more likely to partially comply or to not comply with the tasks. All but five of the negotiating statements made by the two students involved attempts by the students to obtain answers by stating that they did not know how to complete the assignment or by asking clarifying questions. Though there seemed to be a lot of ambiguity for the students in that they were unable to distinguish tasks that were to be "counted", there was little attempt to modify the tasks through negotiation.

Table 5. Frequency of Instructional Task Negotiation, Partial Compliance, and Non-Compliance in the Resource, Health, and Science Classrooms.

Class	Negotiation	Partial Compliance	Non Compliance
Student A			
Resource	1	6	12
Health	9	4	35
Science	3	22	34
Student B			
Resource	23	30	33
Health	4	4	49
Science	24	23	99

Discussion

The students in both studies did not often attempt to verbally negotiate the tasks. These findings seem to confirm the findings of Alexander (1982) and Tousignant & Siedentop (1983) that students in low risk situations often do not attempt to negotiate the tasks. They also confirm the findings of Doyle and Carter (1984) which indicated that high ability students were the ones most likely to negotiate tasks. In these two studies the students were much more likely to change the task by the non-verbal responses. They did less than what the teacher asked, or they simply did not do the task.

In both studies, student responses which did not comply with the task statements were frequently unobserved by the teacher. In other words, the students were not held accountable for the tasks; thus there was little need to negotiate. However, greater risk did not seem to affect negotiation. In the physical education classes where students were held accountable for management tasks, there were no attempts to negotiate these tasks. In the special education study, students were more likely to negotiate instructional tasks, but the rate of negotiation was still very low even for tasks which had a high rate of risk

involvement.

Verbal negotiation seems to be a skill used primarily by high ability students in settings where there is a high degree of risk. When task statements are ambiguous and no negotiation is attempted, students' choices are limited. They may participate in the task unsuccessfully, as happened in the physical education settings, or they may simply not perform the task at all as occurred in the special education study.

While neither study attempted to describe the relationship between student negotiation and successful completion of the task, this would seem to be the next step. If students are more successful with tasks which have been negotiated, perhaps this is a skill which must be taught.

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